

ABSTRACT

[Abstract]

[Task] The invention enables uniformly etching a surface of a sample with an improved repeatability, and etching at a
5 low cost without requiring any large-scale equipment.

[Means for Solving the Problem] In an electron spectroscopy analytical apparatus (1) for executing an analysis of a composition, a chemical state and the like of a surface of a sample (4) or in a depth direction thereof by irradiating an
10 X-ray to the sample (4) from a high-energy particle irradiating unit (6) within a vacuum chamber (2) under a vacuum atmosphere, and detecting a kinetic energy of electrons emitted from the sample (4) by an electric energy analyzer (7) on the basis of a photoelectric effect, the surface of the
15 sample (4) is ion-etched by irradiating a fullerene ion beam to the surface of the sample (4) from an ion gun (8) before irradiating the high-energy particle to the sample (4).